

# Claims

- [c1] 1. A bumper assembly for a motor vehicle, comprising:  
a bumper structure comprising:  
a bumper beam adapted for attachment to a frame of a motor vehicle;  
a hitch receiver attached to said bumper beam;  
a bumper cover for concealing said bumper beam, with said bumper cover having an opening for accessing said hitch receiver; and  
an access door for selectively concealing said hitch receiver, with said access door being mounted to said bumper structure such that said access door is movable from a closed position in which said access door closes said opening such that said hitch receiver is concealed, to an open position in which said hitch receiver is accessible and said access door is stored, with said access door remaining kinematically retained to said bumper structure in both said closed position and said open position.
- [c2] 2. A bumper assembly according to Claim 1, wherein said access door is hingedly mounted to said bumper cover.

- [c3] 3. A bumper assembly according to Claim 1, wherein said access door is slidably mounted to said bumper cover.
- [c4] 4. A bumper assembly according to Claim 3, wherein said access door is slidably movable in a lateral direction, with said access door being slidably attached to a plurality of channels formed in the bumper cover.
- [c5] 5. A bumper assembly according to Claim 3, wherein said access door is slidably movable in a generally vertical direction.
- [c6] 6. A bumper assembly according to Claim 1, wherein said access door is hingedly mounted to said bumper cover about a generally horizontal pivot axis.
- [c7] 7. A bumper assembly according to Claim 1, wherein said bumper beam is adapted to be attached to a frame at the front of a motor vehicle.
- [c8] 8. A bumper assembly according to Claim 1, wherein said bumper beam is adapted to be attached to a frame at the rear of a motor vehicle.
- [c9] 9. A bumper assembly according to Claim 1, wherein said access door is hingedly mounted to said bumper beam about a generally horizontal pivot axis.

- [c10] 10. A bumper assembly according to Claim 9, wherein said access door is spring loaded so as to move upwardly into said open position when released from said closed position.
- [c11] 11. A bumper assembly according to Claim 10, wherein said access door is electrically releasable from said closed position.
- [c12] 12. A bumper assembly according to Claim 10, wherein said access door is mechanically releasable from said closed position.
- [c13] 13. A bumper assembly according to Claim 1, wherein said bumper beam is adapted to be attached to a rail of a motor vehicle.
- [c14] 14. A method for providing a concealable tow hitch for an automotive vehicle, comprising the steps of:  
providing a bumper beam which is rigidly attached to a frame of the motor vehicle;  
providing a hitch receiver integral with said bumper beam;  
providing a bumper cover for concealing said bumper beam, with said bumper cover having an aperture for accessing said hitch receiver; and  
providing an access door which is kinematically retained

upon said bumper cover and movable between a closed position in which said access door encloses said aperture such that said hitch receiver is concealed, and an open position in which said hitch receiver is accessible and said access door is stored.

[c15] 15. A method according to Claim 14, wherein said access door is hingedly attached to said bumper cover such that said access door is movable from said closed position to said open position by rotating said access door.

[c16] 16. A method according to Claim 14, wherein said access door is slidably attached to channels formed in said bumper cover such that said access door is movable from said closed position to said open position by sliding said access door into a storage position within said cover.

[c17] 17. A method according to Claim 14, wherein said access door is kinematically retained upon said cover such that said access door may be selectively removed from said cover.

[c18] 18. A method according to Claim 14, wherein said bumper beam is attached to said frame at the front of the motor vehicle.

[c19] 19. A method according to Claim 14, wherein said

bumper beam is attached to said frame at the rear of the motor vehicle.

[c20] 20. An automotive vehicle, comprising:  
a body having two longitudinal ends;  
a frame extending under said body for at least a portion of the length of said body;  
a bumper beam extending transversely across one of said longitudinal ends of said body; with said bumper beam being attached to said frame;  
a hitch attached to said bumper beam;  
a bumper cover for concealing said bumper beam, with said bumper cover having an opening for accessing said hitch; and  
an integral access door for selectively concealing said hitch, with said access door being mounted to said bumper cover such that said access door is movable from a first position in which said access door closes said opening such that said hitch is concealed, to a second position in which said hitch receiver is accessible and said access door is stored, with said access door remaining attached to said bumper cover in both of said first position and said second position.

[c21] 21. A bumper assembly according to Claim 20, wherein said access door is hingedly mounted to said bumper cover.

- [c22] 22. A bumper assembly according to Claim 20 wherein said access door is slidably mounted to said bumper cover.
- [c23] 23. A bumper assembly according to Claim 22, wherein said access door is slidably movable in a lateral direction.
- [c24] 24. A bumper assembly according to Claim 22, wherein said access door is slidably movable in a generally vertical direction, with said access door being retained upon a plurality of channels formed in said bumper cover.
- [c25] 25. A bumper assembly according to Claim 20 wherein said access door is hingedly mounted to said bumper cover about a generally horizontal pivot axis.
- [c26] 26. A bumper assembly according to Claim 20 wherein said bumper beam is attached to said frame at the front of the motor vehicle.
- [c27] 27. A bumper assembly according to Claim 20 wherein said bumper beam is attached to said frame at the rear of the motor vehicle.
- [c28] 28. A bumper assembly according to Claim 20 wherein said bumper cover and said access door each comprise molded plastic.

- [c29] 29. A bumper assembly according to Claim 28 wherein said bumper cover and said access door comprise an integral molded plastic component, with said access door being hinged to said bumper cover by a plastic living hinge.
- [c30] 30. A bumper assembly according to Claim 20, wherein said access door is hingedly mounted to said bumper cover, with said door having a spring for driving the door from said first position to said second position when a latch is released.
- [c31] 31. A bumper assembly according to Claim 30, wherein said spring comprises a torsion bar.
- [c32] 32. A bumper assembly according to Claim 30, wherein said spring comprises a torsion bar.
- [c33] 33. A method for providing an access door for concealing a hitch receiver in a bumper assembly of an automotive vehicle, wherein said bumper assembly has a bumper cover with an aperture for accessing the hitch receiver, with said method comprising the steps of: providing an access door having an outer surface and an inner surface, with said access door further having an attaching bracket mounted to said inner surface, with said bracket being adapted for engagement with said hitch

receiver, and with said access door being sized so as to engage with said bumper cover and extending about the periphery of said aperture, so as to generally close said aperture, thereby concealing said hitch receiver; and installing said access door upon said vehicle by engaging said attaching bracket with said hitch receiver, thereby placing the access door in contact with the bumper cover at the periphery of said aperture.

[c34] 34. A method according to Claim 33, wherein said outer surface of said access door is decorated.

[c35] 35. A method according to Claim 33, wherein said access door is tethered to said bumper assembly.

[c36] 36. An access door adapted to conceal a tubular hitch receiver mounted within a bumper assembly of an automotive vehicle, wherein said bumper assembly has a bumper cover with an aperture for accessing the hitch receiver, with said access door having an outer surface and an inner surface, with said access door further having an attaching bracket mounted to said inner surface, with said attaching bracket being adapted for telescopic engagement with said hitch receiver, and with said access door being sized so as to engage said bumper cover and extending about the periphery of said aperture, so as to generally close the entirety of said aperture,



thereby concealing said hitch receiver.

- [c37] 37. An access door according to Claim 36, wherein said access door further comprises a tether having a first end attached to said access door and a second end adapted for attachment to a vehicle.
- [c38] 38. An access door according to Claim 36, wherein said access door further comprises at least one spring-loaded latch for engaging said attaching bracket with a hitch receiver.